


FEMCard analysis result

20.10.15

Project data	
Projectname	small_strain_Viscoelasticity_compressible
Folder	F:\tmp_del\Demo_Projects\A_isotropic_material\D_viscoelasticity_small_strain\compressible_m
Created at	08.06.2015
Maker	Parsolve GmbH
Comment	Synthetic measurement data
Material model	ISOTR SMALL strain VISCOELASTICITY, 5 relaxation modules

Test informations

Test 1

Color	
Number	1
Name	Visco_SM_Uniax
Folder	F:\A_synth_meas\A_isotropic_material\D_viscoelasticity_small_strain\compressible_material\Visco_SM_L
Load type	Isotropic time-dependent SMALL strain UNIAXIAL axial stress vs. axial and transverse sti
Weight T	1

Tests weight TR

Test 1		
Start	End	Value
0	50	19.7
51	100	6.56
101	350	1
351	600	1
601	650	4.92
651	700	4.92

Tests weight SD

Test 1	
Strain direction	Value
$\varepsilon_{\text{exp}}^{\text{xx}}$	1
$\varepsilon_{\text{exp}}^{\text{yy}}$	2.59

FEMCard analysis result

20.10.15

Model parameter					
Parameter	Fix	Lower limit	Upper limit	Start value	Result
E		10	10000	50	2500.82
PR		1e-05	0.499	0.485	0.3098214
g_1		0.0001	0.8	0.12	0.178593
tau_1		0.0001	5	0.3	0.4908759
g_2		0.0001	0.7	0.08	0.1318639
tau_2		0.0001	20	1	1.055464
g_3		0.0001	0.7	0.07	0.153425
tau_3		0.0001	100	10	13.24307
g_4		0.0001	0.4	0.02	0.08547269
tau_4		0.0001	1000	100	150.9851
g_5		0.0001	0.4	0.01	0.04917642
tau_5		0.0001	3000	1000	1026.075

Processing parameter	
Max. number of steps	200
LM start value	0.1
Max. error sum of squares	0.004

Processing results	
Steps	9
Least squares sum	0.00367993

Correlation matrix												
	E	PR	g_1	tau_1	g_2	tau_2	g_3	tau_3	g_4	tau_4	g_5	tau_5
E	1	-0.965	-0.677	-0.814	0.699	-0.618	-0.291	-0.203	-0.141	-0.0568	-0.0552	-0.0286
PR	-0.965	1	0.665	0.799	-0.687	0.607	0.286	0.199	0.138	0.0558	0.0541	0.0281
g_1	-0.677	0.665	1	0.974	-0.999	0.989	-0.115	0.484	0.0652	0.144	-0.0319	0.073
tau_1	-0.814	0.799	0.974	1	-0.981	0.939	0.0133	0.41	0.0933	0.119	-0.00294	0.0604
g_2	0.699	-0.687	-0.999	-0.981	1	-0.984	0.0949	-0.469	-0.0698	-0.137	0.0257	-0.0698
tau_2	-0.618	0.607	0.989	0.939	-0.984	1	-0.191	0.559	0.0506	0.171	-0.0558	0.0873
g_3	-0.291	0.286	-0.115	0.0133	0.0949	-0.191	1	-0.0332	0.385	0.545	-0.436	0.375
tau_3	-0.203	0.199	0.484	0.41	-0.469	0.559	-0.0332	1	0.0913	0.614	-0.433	0.356
g_4	-0.141	0.138	0.0652	0.0933	-0.0698	0.0506	0.385	0.0913	1	0.654	-0.842	0.902
tau_4	-0.0568	0.0558	0.144	0.119	-0.137	0.171	0.545	0.614	0.654	1	-0.913	0.797
g_5	-0.0552	0.0541	-0.0319	-0.00294	0.0257	-0.0558	-0.436	-0.433	-0.842	-0.913	1	-0.87

FEMCard analysis result

20.10.15

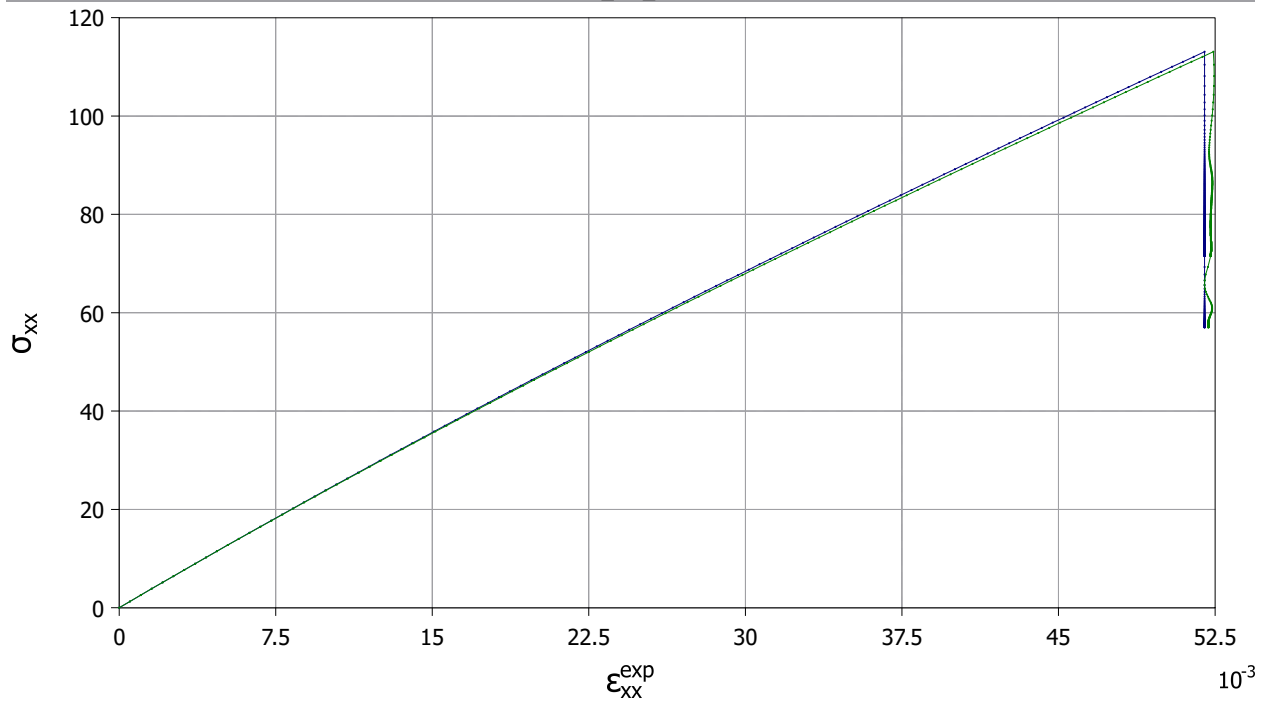
tau_5	-0.0286	0.0281	0.073	0.0604	-0.0698	0.0873	0.375	0.356	0.902	0.797	-0.87	1
-------	---------	--------	-------	--------	---------	--------	-------	-------	-------	-------	-------	---

FEMCard analysis result

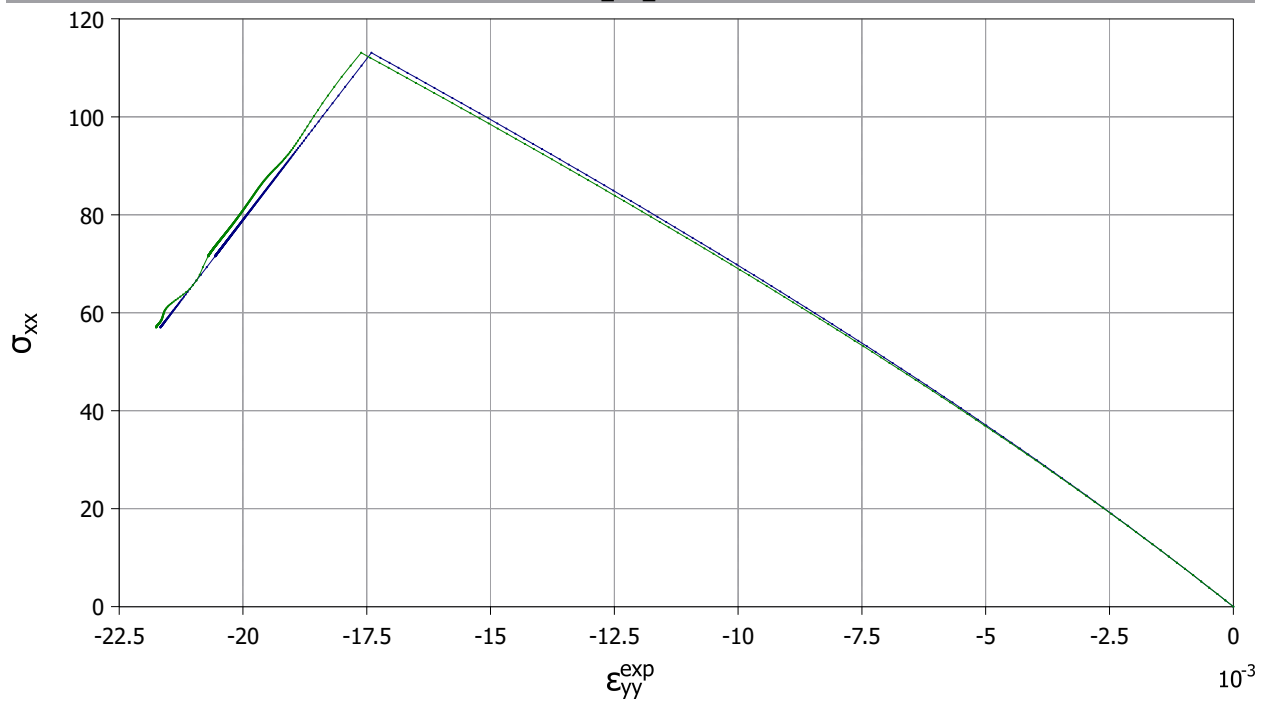
20.10.15

Verification

Visco_SM_Uniax



Visco_SM_Uniax



FEMCard analysis result

20.10.15

